

**Notice of Allowability**

Application No.

10/509,854

Examiner

Patricia L. Hailey

Applicant(s)

KARVINEN ET AL.

Art Unit

1755

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicants' amendment filed on March 9, 2006.
2. ☒ The allowed claim(s) is/are 1,4 and 6-15.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date May 30, 2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

Applicants' remarks and amendments, filed on March 9, 2006, have been carefully considered. Claims 2, 3, and 5 have been canceled; no new claims have been added.

Claims 1, 4, and 6-15 remain pending in this application.

### ***Withdrawn Objections and Rejections***

The objection to claim 6 and the rejections of claims 1-15 stated in the previous Office Action have been withdrawn in view of Applicants' amendments.

The 103(a) rejections of: (1) claims 1-4 and 6-15 as being unpatentable over Mabbs et al. (U. S. Patent No. 3,341,291) and (2) claims 1, 5, 10, 11, and 13-15 as being unpatentable over Japanese Patent No. 10-230169, stated in the previous Office Action, have been withdrawn in view of Applicants' amendments and persuasive arguments traversing these rejections.

To overcome these rejections, Applicants' have amended the claims to incorporate the subject matter of claims 2, 3, and 5 into independent claim 1.

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Tanya Harkins on May 30, 2006.

*The application has been amended as follows:*

a. In the last line of claim 10, after "5 w%", please insert the phrase ~~-of sulphur-~~.

(This phrase was inadvertently deleted from the claim.)

b. Please delete the second appearance of claim 15.

(Claim 15 was inadvertently printed twice.)

#### ***Allowable Subject Matter***

2. Claims 1, 4, and 6-15 are allowed.

#### ***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach or suggest for preparing a photocatalyst containing titanium dioxide, wherein a sulphurous titanium dioxide hydrate precipitate is formed from an acid solution containing titanium oxysulphate at a temperature under the boiling point of the solution via addition of crystal nuclei, the precipitate is separated and subsequently subjected to thermal treatment to obtain a crystalline product having a sulphur content of 1 to 5 w %, wherein said precipitation is conducted without the addition of a base and in a temperature range of from 70°C to 100°C, and said precipitate is calcinated in air at a temperature ranging from 100°C to 500°C.

Mabbs et al. disclose exemplary calcinations ranging from 700°C to 1100°C (col. 3, lines 60-63), which is outside the claimed calcination range, and the Japanese Patent, while disclosing heat treatment conditions, do not explicitly disclose any calcination steps. Further, neither reference teaches or suggests any sulphur contents for the respectively disclosed titanium dioxides.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

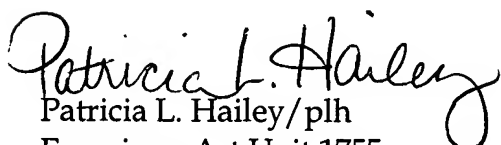
### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (571) 272-1369. The examiner can normally be reached on Mondays-Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Patricia L. Hailey/plh  
Examiner, Art Unit 1755  
May 30, 2006

  
J.A. LORENZO  
SUPERVISORY PATENT EXAMINER